

Transvaginal intestinal evisceration: clinical case

Valentin Bernic, Adelina Tanevski, Andreea Luduşanu, Bogdan Mihnea Ciuntu*, Ciprian Cirdeiu, Andronic Mihaela, Andronic Dan, Vasilescu Alin, Zabara Mihai, Vintila Dan, Daniel Timofte, Cristian Dumitru Lupaşcu, Ştefan Octavian Georgescu

Grigore T. Popa University of Medicine and Pharmacy Iasi, Romania; Faculty of Medicine, Department of Surgery; Emergency County Clinical Hospital "St.Spiridon", Department of Surgery ;

Abstract: Small bowel evisceration through the vagina is a rare surgical emergency that requires urgent surgical intervention because of the risk of developing acute small bowel ischemia. The clinical case is represented by an 81-year-old patient with vaginal intestinal evisceration, known in the past with 5 natural births, uterine cerclage in the last pregnancy, persistence of vaginal prolapse for 20 years. Gut evisceration was caused by the postmenopausal period, atrophic vagina caused by the enterocele susceptible to rupture from increased intra-abdominal pressure or trauma. From the pathogenic point of view, the lesion of an anatomical structure, as in the case reported by us of the posterior vaginal recess with the evisceration of the small intestine (ileum) in its evolution, initially achieves an inflammatory contact from the first stages. **Objectives:** to present the surgical emergency, the etiology, the possible complications and the method of choice for the treatment of the given pathology. **Material and methods:** were composed from the specialty literature, the case was elucidated by surgical intervention through a double approach: transabdominal and transvaginal. The multidisciplinary team was composed of general surgeons, gynecologist and anesthetist. **Results:** The results of the given case show the importance of rapid resolution of intestinal evisceration to avoid bowel ischemia and minimize the risk of subsequent recurrence. **Conclusion:** Early detection and surgical management of this rare surgical emergency is imperative to prevent small bowel ischemia that may require resection and the development of sepsis and systemic inflammatory response syndrome due to intestinal necrosis that may ultimately lead to death.

Keywords: vaginal prolapse, evisceration, cystocele.

Introduction:

Studies in the field have reported conclusive data, according to which vaginal evisceration can occur as a result of an injury, either trauma or following a uterine, vaginal surgical intervention, or it can even occur spontaneously as a result of increased intra-abdominal pressure, having as a contributing factor the effort during the act of defecation or cough [1]. Transvaginal gut evisceration was first described by Hypernaux in 1864 [2]. Currently, there are a little over 130 published cases [3].

Clinical case:

We present a clinical case of vaginal evisceration due to perforation of the posterior vaginal wall through the perineum. The diagnosis was confirmed by physical assessment followed by emergency surgery, which ultimately had a positive outcome. The 81-year-old patient is admitted to the clinic for a vaginal evisceration. The given complication assessed insidiously 3 days ago and had a progressive evolution. According to the anamnestic data, the patient has 5 natural births, and the last sexual act took place at the age of 60, (21 years ago). The patient presented herself as an emergency in the General

Surgery Clinic of St. Spiridon Hospital, Iaşi by inter-hospital transfer from the territory, with accusations of vaginal evisceration with an onset 3 days ago (ABP: 110/70mmHg; Ps: 78b/min). The patient was diagnosed 20 years ago with vaginal prolapse. Gynecological consultation: Erosion of the posterior vaginal wall, complicated with intestinal perforation and evisceration. Total vaginal prolapse. In the past, she underwent uterine cerclage during her last pregnancy. The preoperative diagnosis: Intestinal evisceration through perforation of the posterior vaginal wall. Vaginal erosion. Total vaginal prolapse.

Corresponding

bogdanmciuntu@yahoo.com

author:

Received: February 15, 2023; **Accepted March** 02, 2023; **Published March** 31, 2023

Citation: Bernic V., Tanevski Adelina, Ludusanu Andreea, Ciuntu M. B. Cirdeiu C. Andronic Mihaela, Andronic D., Vasilescu A., Zabara M., Vintilă D., Timofte D., Lupaşcu C., Georgescu Şt. O. Transvaginal intestinal evisceration: clinical case. Journal of Surgery [Jurnalul de chirurgie]. 2023; 19(1): 85 -89, DOI: 10.22551/JSURG.2023.01.11

Copyright © 2023: Bernic V. et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Cystocele. Under empiric antibiotic therapy with broad-spectrum antibiotics and laboratory examinations (**Table 1**), emergency surgical intervention is decided.

INDICATORS	Preoperative result	5-th day postoperative result
Leukocyte ($\times 10^3/\mu\text{L}$)	17,3	10,0
Erythrocytes ($\times 100^3/\mu\text{L}$)	4,16	3,45
Hemoglobin (g/dl)	12,1	10
Hematocrit (%)	36,5	30
Platelets ($\times 10^3/\mu\text{L}$)	333	299
Lymphocytes (%)	14,2	11,1
C-Reactive Protein (mg/L)	14,35	10,67
Creatinine (mg/dl)	1,11	0.97
Urea (mg/dl)	64	38
Glucose (mg/dl)	142	90
Aspartate aminotransferase (U/L)	19	10
Alanine aminotransferase (U/L)	13	14

Table 1: Laboratory examinations (preoperative and postoperative).



Figure 1: A – Eviscerated intestinal loop and cystocele;

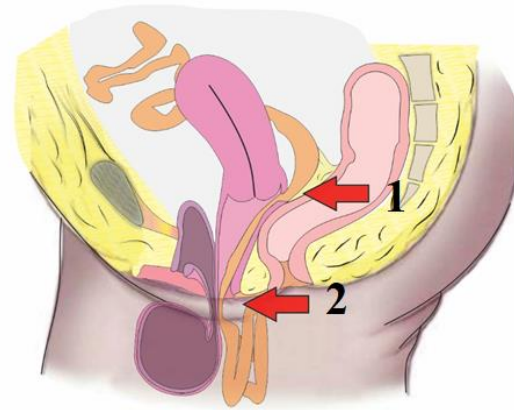


Figure 1: B – Schematic sagittal view 1 - posterior fornix dehiscence, 2 – Eviscerated organs.

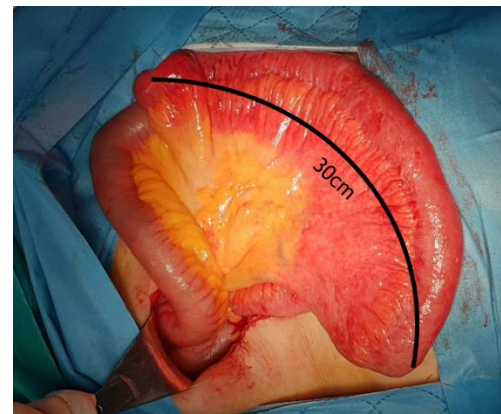


Figure 2: Portion of eviscerated intestine with signs of inflammation and ischemia.

In the context of what has been reported, surgical intervention is performed, and the decision for an operation as early as possible was made by evaluating the condition of the eviscerated intestine, with the aim of avoiding intestinal resection, if the condition of the eviscerated intestine (ileum) allows it (**Figure 1**). The surgical intervention was performed by a multidisciplinary team composed of general surgeons, gynecologist and anesthesiologist, through a double approach: transabdominal and transvaginal. Intraoperatively, a careful review of the eviscerated small intestine (ileum) (**Figure 2**), the state of the vaginal wall, the place of eversion, the nature of the vaginal perforation (**Figure 3**), and the viability of the eviscerated intestinal loop is initially practiced. The operation field was washed and the intestinal loop was repositioned in the peritoneal cavity through an anterior abdominal approach followed by plasty of the posterior recess of the vagina (**Figure 3B**).

and uterine promontofixation (**Figure 4**). A urinary catheter (Foley 18FR) was mounted in the urinary bladder.

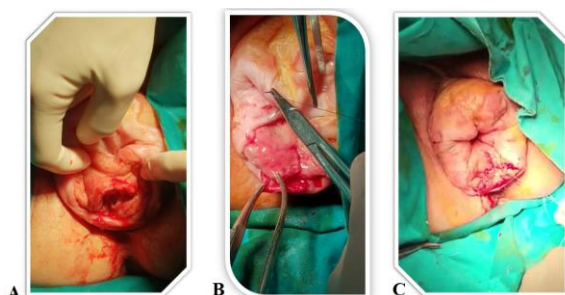


Figure 3: A - Perforated posterior fornix. B – defect suture. C – final view.

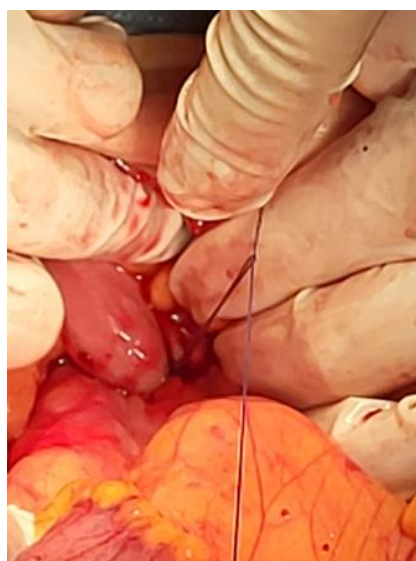


Figure 4: Uterus promontofixation.

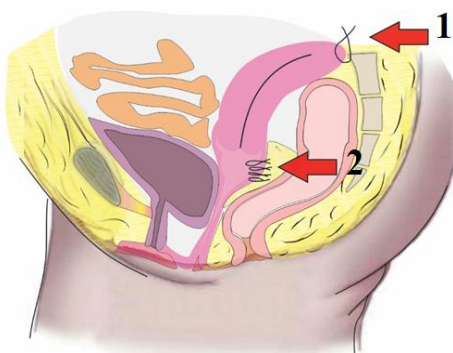


Figure 5: Schematic view of surgery.

1 - Promontofixation **2** – Suture of perforated posterior fornix

Postoperatively, according to the antibiogram, the empiric antibiotherapy course as well as hydroelectrolytic, acid-base, metabolic rebalancing and antifungal treatment continued. The postoperative evolution is favorable with

discharge at home on the 10th postoperative day with the following recommendations: Monitoring at the family doctor, obstetrics and gynecology dispensary, conservative treatment (local baths, anti-inflammatory).

Discussion:

Vaginal evisceration, although extremely uncommon, has been most commonly reported in postmenopausal women. Most had a history of hysterectomy, multiple vaginal operations (vaginal prolapse, enterocele, cystocele, rectocele) [4]. Less often after intercourse. In such cases: whether the walls of the postmenopausal vagina are thin, scarred and shortened, predisposing to spontaneous, post-traumatic rupture or an already atrophic postmenopausal vagina that is stretched by an advancing enterocele, as in our case, making it susceptible to rupture from increased intra-abdominal pressure or trauma [5]. As a result, the morphopathological changes induced by the evolution of the disease are expressed diffusely, depending on the clinical-evolutionary stage. There are studies that have shown that most women who have been diagnosed with vaginal evisceration have had previous vaginal surgery. Kowalski (1996) reporting a 67% incidence of vaginal surgery in postmenopausal patients studied. Analyzing the literature, we found that at least 54% of all women experiencing vaginal eviscerations had previous vaginal surgery, ranging from 1 day to 15 years after the last procedure [6]. From the pathogenic point of view, the lesion of an anatomical structure, as in the case reported by us of the posterior vaginal recess with the evisceration of the small intestine (ileum) in its evolution, initially and at stages achieves an inflammatory contact. Thus, angiogenesis at the contact site, in the case of the vaginal wall, stimulated by inflammatory hypoxia by means of peptides belonging to endothelial growth vessels (VEGF) or inflammatory mediators (interleukins, cytokines, TNF), in turn contribute to structural anatomical changes at perforation. So, fistulization occurs following the perforation of the vaginal wall [7]. The particular evolution of the disease and hence the delay in diagnosis and appropriate therapy associate serious complications, the least common – perforation of the vaginal wall with intestinal evisceration. The late diagnosis of the anatomical-functional condition of the vaginal wall that complicates vaginal evisceration can lead to the development of an aggressive endotoxemia and the initiation of plurivisceral

failure syndrome, including chronic kidney disease, liver failure, etc. [5]. Evisceration of small bowel through the vagina has a mortality rate of 6% [8]. A careful medical evaluation and well-argued management of such emergencies taken into account allow us to initiate maneuvers to stabilize the patient's general state of hydroelectrolytic, acid-base, metabolic rebalancing, the mounting of wet saline sponges on the eviscerated intestine, under early antibiotic therapy, imaging evaluation by ultrasound, radiography to exclude foreign bodies, other comorbidities and to intervene promptly surgically. The emergency surgical technique will be through both the abdominal and vaginal approach, establishing the condition of the loop of the eviscerated intestine, the vascularization, in advanced cases practicing the resection of any segment of compromised intestine, as well as necrotic vaginal tissue, the careful washing of the contaminated areas and the restoration of the vaginal wall [5,8,9,10].

Conclusions:

As a practical conclusion, we would like to emphasize that in the presence of vaginal prolapse in postmenopausal women, even if the evolutionary semiology of the given condition is non-specific, it must definitely lead to the clinical-paraclinical exploration carried out by the gynecologist, especially in inflammatory processes, infectious diseases added to the background pathology or other complications. The presented case is evocative due to the presence of associated complications, erosive changes, perforation, gut evisceration, the seriousness of which is much more important.

Author Contributions: All authors have read and agreed to the published version of the manuscript. All authors have the same contribution on this paper.

Funding: The work did not use financial resources involving any company or institution.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data published in this research are available on request from the first author and corresponding authors.

Conflicts of Interest: The authors declare no conflict of interest.

References:

1. Collins Dictionary of Medicine. (2004, 2005). Retrieved March 18 2023 from <https://medical-dictionary.thefreedictionary.com/vaginal+evisceration>
2. Arabadzhieva E, Bulanov D, Shavalov Z, Yonkov A, Bonev S. Spontaneous transvaginal intestinal evisceration in case of long-standing uterine prolapse. BMC Surg. 2022 May 4;22(1):157. doi: 10.1186/s12893-022-01615-x. PMID: 35509095; PMCID: PMC9066937.
3. Liviu Dubei, Ina Radu, Lilia Bobeico, Adam Oneasă. Eviscerația transvaginală posthisterectomie totală. prezentare de caz. Jurnalul medical de Bucovina, vol. IV, nr. 3, 2018. Pg. 2.
4. Nasr AO, Tormey S, Aziz MA, Lane B. Vaginal herniation: case report and review of the literature. American journal of obstetrics and gynecology. 2005;193(1):95-97.
5. Powell, John L. MD; Gentry, Jason K. MD Vaginal Evisceration Journal of Pelvic Surgery: March 2001 - Volume 7 - Issue 2 - p 94-97
6. Peter C. Ferrera MD, Lorraine G. Thibodeau MD. Vaginal Evisceration Department of Emergency Medicine, Albany Medical Center, Albany, New York, USA Available online 9 July 1999.
7. Chaitanya GV, Franks SE, Cromer W, Wells SR, Bienkowska M, Jennings MH, Ruddell A, Ando T, Wang Y, Gu Y, Sapp M, Mathis JM, Jordan PA, Minagar A, Alexander JS. Differential cytokine responses in human and mouse lymphatic endothelial cells to cytokines in vitro. Lymphat Res Biol. 2010 Sep;8(3):155-64. doi: 10.1089/lrb.2010.0004. PMID: 20863268; PMCID: PMC3357074.
8. Rogers P., Homg L., Kedar J., Zi Qin Ng., Koong D. Vaginal evisceration of small bowel. Journal of Surgical Case Reports, Vol. 2019, Issue 11, November 2019.
9. Missori G, Marchesini NLA, Mosca D, Ricciardolo AA, Serra F, Gelmini R. Vaginal Evisceration of Small Bowel With Extraperitoneal Ileal Resection of the Herniated Loops: A Case Report. Front Surg. 2022 Apr 26;9:878760. doi: 10.3389/fsurg.2022.878760. PMID: 35558386; PMCID: PMC9086488.
10. Amakpa E, Hernandez-Gonzalez G, Camejo-Rodriguez E. Small bowel evisceration in a perforated uterine

prolapse. *Ghana Med J.* 2021;55(2):156–159.
doi: 10.4314/gmj.v55i2.10. [[CrossRef](#)] [[Google Scholar](#)]